

## DRAINAGE OF EXHIBITION PARK, TORONTO

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**E**XHIBITION PARK, Toronto, comprises 235 acres of land extending along the north shore of Lake Ontario for a distance of  $1\frac{1}{2}$  miles, with an average width of 1,500 ft. The land rises abruptly from the water's edge for 15 ft., and then extends northward practically level for 500 ft.

This flat piece of land is of stiff clay, and for years was wet and covered with long, coarse grass. Level land is not the easiest land to drain, and although there was no marsh there, yet the grass held the water and it was always wet. This level area includes the Midway, the half-mile ring, the Manufacturers' building (the largest building on the grounds), and the Transportation building.

The writer well remembers staking out the Transportation building in water from 2 to 3 ins. deep, and grass at least 3 ft. high. The magnifying glass used in turning off the angles on the transit was dropped, and it was some work to find it in the long grass.

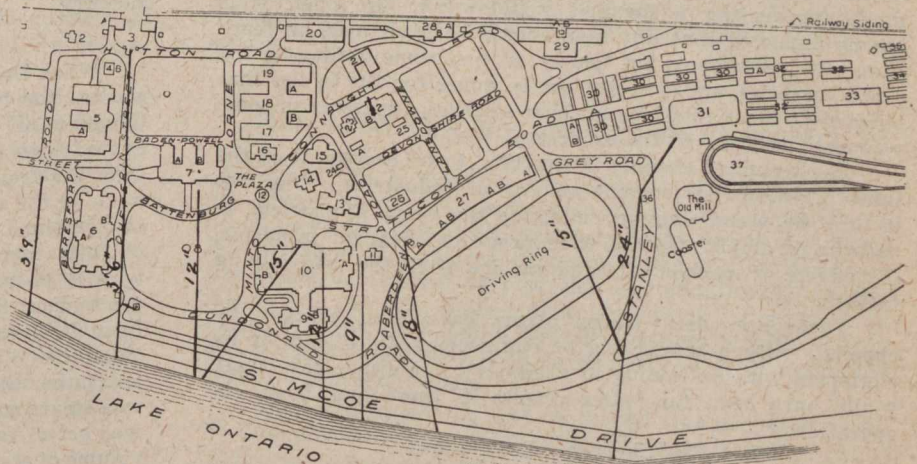
The whole exhibition grew like Topsy, as the march of events demanded, the Manufacturers' building being the first structure of any size on this badly drained land. The old plans show that a system of farm tile was laid over this site before commencing construction. The Transportation building was raised high and dry on an embankment, but shortly after this building was erected, roads were graded towards the lake and paved, catch basins and sewers were built, and no water was held on this flat.

Farther east, on the midway section, the same difficulty was encountered. A heavy rain simply flooded the area, and if this occurred during exhibition, tanbark had to be hauled to make paths, and even then it was a common sight to see people wading ankle-deep in water, tanbark and mud to see the attractions in the various shows. The half-mile ring and ball field are practically level, and up to the present have not been sufficiently drained.

Until about ten years ago drains were put in for each new building as required, but no general system was planned

the lake up, diverging and branching with smaller pipes to the stables and newly paved roads. At the west end of the grandstand an 18-in. pipe was also laid to the lake and found to be none too large on a day when 150,000 people are being cared for, to say nothing of storm water should there be rain. Immediately west of this, at the east end of the Manufacturers' building, is a 9-in. pipe; under the building, a 12-in. and a 15-in. pipe; and a little to the west, and going up to the Horticultural building, is a 12-in. pipe.

The main parts of the grounds being paved, and the roofs of buildings shedding water so quickly, necessitated large pipes being installed. The old city sewer on Dufferin St., 3 ft. 6 ins. by 2 ft. 6 ins., and a similar one on Do-



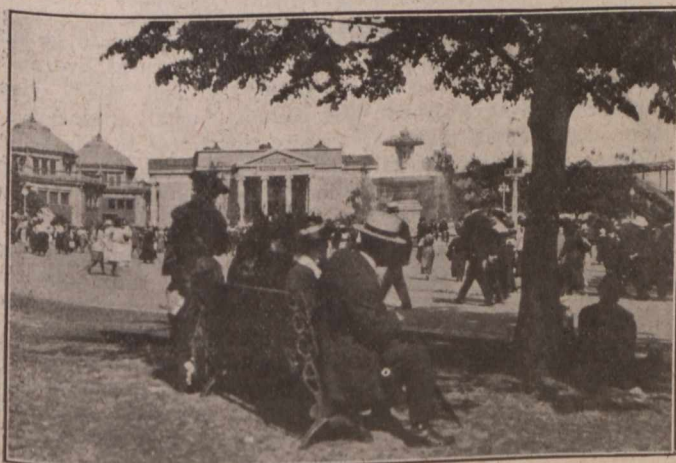
PLAN OF GROUNDS AND BUILDINGS, EXHIBITION PARK, TORONTO, SHOWING LOCATION AND SIZE OF DRAINS

Key to Numbers of Principal Structures: (3) Dufferin Gate, (5) Government Bldg., (6) Transportation Bldg., (7) Horticultural Bldg., (9) Woman's Bldg., (10) Manufacturers' Bldg., (18) Industrial Bldg., (20) Machinery Hall, (27) Grandstand, (36) Midway, (A and B) Lavatories.

minion St., amply take care of the greenhouses as well as adjacent property not high enough to drain into the main city sewer on Springhurst Ave.

In designing a system of sewers, more care is needed to anticipate future growth than for most engineering undertakings, even water works or lighting, as duplicate sewers are very costly, and it is sometimes difficult to lay a second sewer on a narrow street already encumbered underground with many private drains and water pipes.

At a park like Exhibition Park, where a large number of people congregate for a short time, all supply pipes and drains should be built with large capacity. A few years ago the people living near this park found their gas supply cut off at noon, and nobody could account for it until it was discovered that the restaurants at the exhibition were using all that the main could supply. Fountains and lavatories work to their utmost capacity, and hose run all night for at least two weeks before the exhibition opens, to bring the grass and flowers to perfection. Care must be taken to have all commodities supplied to almost every corner of the grounds, and in convenient places. Plans and profiles must be kept of all underground wires, and of gas, water and sewer pipes, as rush orders are often received to drain a sink in a new tent, or to supply its users with light, heat and water.



TYPICAL SCENE, EXHIBITION PARK, TORONTO

to take care of the grounds as a whole. At that time a 15-in. pipe was laid from the east end of the grandstand across the ring and connected up with all nearby drains. Only a few years passed before this drain was found to be quite inadequate, and a little farther east a 24-in. pipe was laid from

Plans for the establishment of a national research institute were placed before the Scientific Research Committee of the House of Commons last Monday, with the recommendation that a site of at least 50 acres should be secured near Ottawa, and that a four-storey laboratory, costing \$600,000, should be erected and equipped with scientific instruments costing at least \$100,000. Salaries for staff would require an appropriation of about \$100,000 per annum. This institute would be similar to the Bureau of Standards in Washington or the Mellon Institute in Pittsburgh.